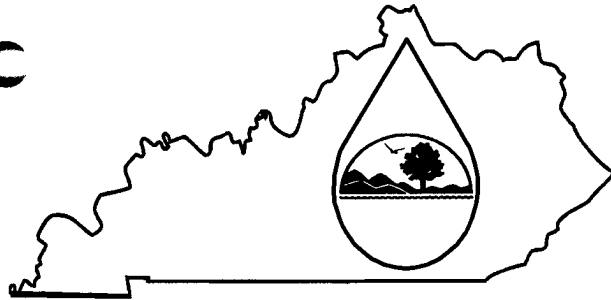
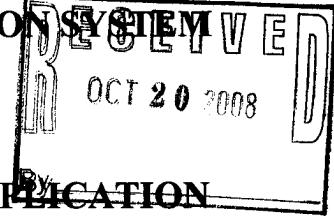


# KPDES FORM 1

AZ # 101081

## KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

### PERMIT APPLICATION



This is an application to: (check one)

- ☒ Apply for a new permit.  
☐ Apply for reissuance of expiring permit.  
☐ Apply for a construction permit.  
☐ Modify an existing permit.

Give reason for modification under Item II.A.

A complete application consists of this form and one of the following:

Form A, Form B, Form C, Form F, or Short Form C

For additional information contact:

KPDES Branch (502) 564-3410

CK 240-

#### I. FACILITY LOCATION AND CONTACT INFORMATION

AGENCY  
USE

01 07 60 3

A. Name of business, municipality, company, etc. requesting permit  
LIGHTSOURCE MINING COMPANY

#### B. Facility Name and Location

Facility Location Name:

SIMPSON BRANCH NO. 1

Facility Location Address (i.e. street, road, etc.):

SIMPSON BRANCH

Facility Location City, State, Zip Code:

MINNIE, KY 41653

#### C. Facility Owner/Mailing Address

Owner Name:

LIGHTSOURCE MINING COMPANY

Mailing Street:

P.O. BOX 1590

Mailing City, State, Zip Code:

MARTIN, KY 41649

Telephone Number:  
606-285-9472

#### II. FACILITY DESCRIPTION

A. Provide a brief description of activities, products, etc: This amendment application proposes contour mining in the Fireclay and Fireclay Rider seam to the south west end of the current permit area.

#### B. Standard Industrial Classification (SIC) Code and Description

Principal SIC Code &  
Description:

2121 MINING

Other SIC Codes:

#### III. FACILITY LOCATION

A. Attach a U.S. Geological Survey 7 1/2 minute quadrangle map for the site. (See instructions)

B. County where facility is located:  
FLOYD

City where facility is located (if applicable):  
MINNIE, KY

C. Body of water receiving discharge:  
LEFT BEAVER CREEK

D. Facility Site Latitude (degrees, minutes, seconds):  
37° 28' 21"

Facility Site Longitude (degrees, minutes, seconds):  
82° 44' 12"

Method used to obtain latitude & longitude (see instructions): GPS

F. Facility Dun and Bradstreet Number (DUNS #) (if applicable):

**IV. OWNER/OPERATOR INFORMATION****A. Type of Ownership:**☐ Publicly Owned ☒ Privately Owned ☐ State Owned ☐ Both Public and Private Owned ☐ Federally owned**B. Operator Contact Information (See instructions)**

Name of Treatment Plant Operator:

N/A

Telephone Number:

Operator Mailing Address (Street):

Operator Mailing Address (City, State, Zip Code):

Is the operator also the owner?

Yes ☐ No ☐

Is the operator certified? If yes, list certification class and number below.

Yes ☐ No ☐

Certification Class:

Certification Number:

**V. EXISTING ENVIRONMENTAL PERMITS**

Current NPDES Number:

Issue Date of Current Permit:

Expiration Date of Current Permit:

PENDING

Number of Times Permit Reissued:

Date of Original Permit Issuance:

Sludge Disposal Permit Number:

Kentucky DOW Operational Permit #:

Kentucky DSMRE Permit Number(s):

836-0316

PENDING

C. Which of the following additional environmental permit/registration categories will also apply to this facility?

CATEGORY	EXISTING PERMIT WITH NO.	PERMIT NEEDED WITH PLANNED APPLICATION DATE
Air Emission Source	N/A	
Solid or Special Waste	N/A	
Hazardous Waste - Registration or Permit	N/A	

**VI. DISCHARGE MONITORING REPORTS (DMRs)**

KPDES permit holders are required to submit DMRs to the Division of Water on a regular schedule (as defined by the KPDES permit). The information in this section serves to specifically identify the department, office or individual you designate as responsible for submitting DMR forms to the Division of Water.

A. Name of department, office or official submitting DMRs:	G. DALE MURRAY II
B. Address where DMR forms are to be sent. (Complete only if address is different from mailing address in Section I.)	
DMR Mailing Name:	
DMR Mailing Street:	
DMR Mailing City, State, Zip Code:	
DMR Official Telephone Number:	


## VII. APPLICATION FILING FEE

KPDES regulations require that a permit applicant pay an application filing fee equal to twenty percent of the permit base fee. Please examine the base and filing fees listed below and in the Form 1 instructions and enclose a check payable to "Kentucky State Treasurer" for the appropriate amount. Descriptions of the base fee amounts are given in the "General Instructions."

Facility Fee Category:	Filing Fee Enclosed:
Surface Mining Operation ✓	\$240.00

## VIII. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME AND OFFICIAL TITLE (type or print):	TELEPHONE NUMBER (area code and number):
G. DALE MURRAY II, PRESIDENT	606-285-9472
SIGNATURE 	DATE: SEPTEMBER 15, 2008

**KENTUCKY POLLUTANT DISCHARGE  
ELIMINATION SYSTEM**

**PERMIT APPLICATION**

A complete application consists of this form and Form 1.  
For additional information, contact KPDES Branch, (502) 564-3410.

Name of Facility: LIGHTSOURCE MINING COMPANY		County: FLOYD							
<b>I. OUTFALL LOCATION</b>		AGENCY USE	0	1	0	7	6	0	3

For each outfall list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

Outfall No. (list)	LATITUDE			LONGITUDE			RECEIVING WATER (name)
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds	
Reference							
Attachment I.A							

**II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES**

- A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfall. If a water balance cannot be determined (e.g., for certain mining activities), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.
- B. For each outfall, provide a description of: (1) all operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) the average flow contributed by each operation; and (3) the treatment received by the wastewater. Continue on additional sheets if necessary.

OUTFALL NO. (list)	OPERATION(S) CONTRIBUTING FLOW		TREATMENT	
	Operation (list)	Avg/Design Flow (include units)	Description	List Codes from Table C-1
Reference Attachment II.A				

## C

C

## C

Permit No. 836-0316

C

Normal Pool (based on field measurement)	Normal Pool (based on field measurement)	Normal Pool (based on field measurement)
1	2	3
4	5	6
7	8	9
10	11	12
13	14	15
16	17	18
19	20	21
22	23	24
25	26	27
28	29	30
31	32	33
34	35	36
37	38	39
40	41	42
43	44	45
46	47	48
49	50	51
52	53	54
55	56	57
58	59	60
61	62	63
64	65	66
67	68	69
70	71	72
73	74	75
76	77	78
79	80	81
82	83	84
85	86	87
88	89	90
91	92	93
94	95	96
97	98	99
100	101	102
103	104	105
106	107	108
109	110	111
112	113	114
115	116	117
118	119	120
121	122	123
124	125	126
127	128	129
130	131	132
133	134	135
136	137	138
139	140	141
142	143	144
145	146	147
148	149	150
151	152	153
154	155	156
157	158	159
160	161	162
163	164	165
166	167	168
169	170	171
172	173	174
175	176	177
178	179	180
181	182	183
184	185	186
187	188	189
190	191	192
193	194	195
196	197	198
199	200	201
202	203	204
205	206	207
208	209	210
211	212	213
214	215	216
217	218	219
220	221	222
223	224	225
226	227	228
229	230	231
232	233	234
235	236	237
238	239	240
241	242	243
244	245	246
247	248	249
250	251	252
253	254	255
256	257	258
259	260	261
262	263	264
265	266	267
268	269	270
271	272	273
274	275	276
277	278	279
280	281	282
283	284	285
286	287	288
289	290	291
292	293	294
295	296	297
298	299	300
301	302	303
304	305	306
307	308	309
310	311	312
313	314	315
316	317	318
319	320	321
322	323	324
325	326	327
328	329	330
331	332	333
334	335	336
337	338	339
340	341	342
343	344	345
346	347	348
349	350	351
352	353	354
355	356	357
358	359	360
361	362	363
364	365	366

Design flow based on 10 year-24 hour storm event

**II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES (Continued)**

C. Except for storm water runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?

☐

Yes (Complete the following table.)

☐

No (Go to Section III.)

OUTFALL NUMBER	OPERATIONS CONTRIBUTING FLOW	FREQUENCY		FLOW				
		Days Per Week	Months Per Year	Flow Rate (in mgd)		Total volume (specify with units)		Duration (in days)
				Long-Term Average	Maximum Daily	Long-Term Average	Maximum Daily	
(list)	(list)	(specify average)	(specify average)					

**III. MAXIMUM PRODUCTION**

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?

☐

Yes (Complete Item III-B) List effluent guideline category:

☒

No (Go to Section IV)

B. Are the limitations in the applicable effluent guideline expressed in terms of production (or other measures of operation)?

☐

Yes (Complete Item III-C)

☒

No (Go to Section IV)

If you answered "Yes" to Item III-B, list the quantity which represents the actual measurement of your maximum level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

MAXIMUM QUANTITY			Affected Outfalls (list outfall numbers)
Quantity Per Day	Units of Measure	Operation, Product, Material, Etc. (specify)	

**IV. IMPROVEMENTS**

A. Are you now required by any federal, state or local authority to meet any implementation schedule for the construction, upgrading, or operation of wastewater equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders and grant or loan conditions.

☐

Yes (Complete the following table)

☒

No (Go to Item IV-B)

IDENTIFICATION OF CONDITION AGREEMENT, ETC.	AFFECTED OUTFALLS		BRIEF DESCRIPTION OF PROJECT	FINAL COMPLIANCE DATE	
	No.	Source of Discharge		Required	Projected

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs (or other environmental projects which may affect your discharges) you now have under way or which you plan. Indicate whether each program is now under way or planned, and indicate your actual or planned schedules for construction.

## V. INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C: See instructions before proceeding – Complete one set of tables for each outfall – Annotate the outfall number in the space provided.

NOTE: Tables V-A, V-B, and V-C are included on separate sheets numbered 5-18.

- D. Use the space below to list any of the pollutants (refer to SARA Title III, Section 313) listed in Table C-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

POLLUTANT	SOURCE	POLLUTANT	SOURCE

## VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

- A. Is any pollutant listed in Item V-C a substance or a component of a substance which you use or produce, or expect to use or produce over the next 5 years as an immediate or final product or byproduct?

☐

Yes (List all such pollutants below)

☒

No (Go to Item VI-B)

- B. Are your operations such that your raw materials, processes, or products can reasonably be expected to vary so that your discharge of pollutants may during the next 5 years exceed two times the maximum values reported in Item V?

☐

Yes (Complete Item VI-C)

☒

No (Go to Item VII)

- C. If you answered "Yes" to Item VI-B, explain below and describe in detail to the best of your ability at this time the sources and expected levels of such pollutants which you anticipate will be discharged from each outfall over the next 5 years. Continue on additional sheets if you need more space.



**VII. BIOLOGICAL TOXICITY TESTING DATA**

Do you have any knowledge of or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☐ Yes (Identify the test(s) and describe their purposes below)

☒ No (Go to Section VIII)

**VIII. CONTRACT ANALYSIS INFORMATION**

Were any of the analyses reported in Item V performed by a contract laboratory or consulting firm?

☐ Yes (list the name, address, and telephone number of, and pollutants analyzed by each such laboratory or firm below)

☒ No (Go to Section IX)

NAME	ADDRESS	TELEPHONE (Area code & number)	POLLUTANTS ANALYZED (list)

**IX. CERTIFICATION**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME AND OFFICIAL TITLE (type or print):

TELEPHONE NUMBER (area code and number):

G. DALE MURRAY II, PRESIDENT

606-285-9472

SIGNATURE

DATE

SEPTEMBER 15, 2008

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages. (See instructions)

V. INTAKE AND EFFLUENT CHARACTERISTICS (Continued from page 3 of Form C)										OUTFALL NO.		
Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.												
1. POLLUTANT	2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No of Analyses
	(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)	
	Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass	
a. Biochemical Oxygen Demand (BOD)												
b. Chemical Oxygen Demand (COD)												
c. Total Organic Carbon (TOC)												
d. Total Suspended Solids (TSS)												
e. Ammonia (as N)												
f. Flow (in units of MGD)	VALUE		VALUE		VALUE			MGD		VALUE		
g. Temperature (winter)	VALUE		VALUE		VALUE			°C		VALUE		
h. Temperature (summer)	VALUE		VALUE		VALUE			°C		VALUE		
i. pH	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM				STANDARD UNITS				

Part B - In the MARK "X" column, place an "X" in the Believed Present column for each pollutant you know or have reason to believe is present. Place an "X" in the Believed Absent column for each pollutant you believe to be absent. If you mark the Believed Present column for any pollutant, you must provide the results of at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO.  (if available)	2. MARK "X"		3. EFFLUENT							4. UNITS		6. INTAKE (optional)		
	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
			(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
a. Bromide (24959-67-9)														
b. Bromine Total Residual														
c. Chloride														
d. Chlorine, Total Residual														
e. Color														
f. Fecal Coliform														
g. Fluoride (16984-48-8)														
h. Hardness (as CaCO <sub>3</sub> )														
i. Nitrate – Nitrite (as N)														
j. Nitrogen, Total Organic (as N)														
k. Oil and Grease														
l. Phosphorous (as P), Total 7723-14-0														
m. Radioactivity														
(1) Alpha, Total														
(2) Beta, Total														
(3) Radium Total														
(4) Radium, 226, Total														

Part B - Continued

1. POLLUTANT And CAS NO.  (if available)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analyses
			(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
n. Sulfate (as SO <sub>4</sub> ) (14808-79-8)														
o. Sulfide (as S)														
p. Sulfite (as SO <sub>3</sub> ) (14286-46-3)														
q. Surfactants														
r. Aluminum, Total (7429-90)														
s. Barium, Total (7440-39-3)														
t. Boron, Total (7440-42-8)														
u. Cobalt, Total (7440-48-4)														
v. Iron, Total (7439-89-6)														
w. Magnesium Total (7439-96-4)														
x. Molybdenum Total (7439-98-7)														
y. Manganese, Total (7439-96-6)														
z. Tin, Total (7440-31-5)														
aa. Titanium, Total (7440-32-6)														

Part C – If you are a primary industry and this outfall contains process wastewater, refer to Table C-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark “X” in the **Testing Required** column for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark this column (secondary industries, nonprocess wastewater outfalls, and non-required GC/MS fractions), mark “X” in the **Believed Present** column for each pollutant you know or have reason to believe is present. Mark “X” in the **Believed Absent** column for each pollutant you believe to be absent. If you mark either the **Testing Required** or **Believed Present** columns for any pollutant, you must provide the result of at least one analysis for that pollutant. Note that there are seven pages to this part; please review each carefully. Complete one table (all seven pages) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT And CAS NO.  (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)		
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses	
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)		
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass		
METALS, CYANIDE AND TOTAL PHENOLS																
1M. Antimony Total (7440-36-0)																
2M. Arsenic, Total (7440-38-2)																
3M. Beryllium Total (7440-41-7)																
4M. Cadmium Total (7440-43-9)																
5M. Chromium Total (7440-43-9)																
6M. Copper Total (7550-50-8)																
7M. Lead Total (7439-92-1)																
8M. Mercury Total (7439-97-6)																
9M. Nickel, Total (7440-02-0)																
10M. Selenium, Total (7782-49-2)																
11M. Silver, Total (7440-28-0)																



Part C – Continued																
1. POLLUTANT And CAS NO.  (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)		
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses	
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)		
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass		
METALS, CYANIDE AND TOTAL PHENOLS (Continued)																
12M. Thallium, Total (7440-28-0)																
13M. Zinc, Total (7440-66-6)																
14M. Cyanide, Total (57-12-5)																
15M. Phenols, Total																
DIOXIN																
2,3,7,8 Tetra- chlorodibenzo, P, Dioxin (1784-01-6)				DESCRIBE RESULTS:												
GC/MS FRACTION – VOLATILE COMPOUNDS																
1V. Acrolein (107-02-8)																
2V. Acrylonitrile (107-13-1)																
3V. Benzene (71-43-2)																
5V. Bromoform (75-25-2)																
6V. Carbon Tetrachloride (56-23-5)																
7V. Chloro- benzene (108-90-7)																
8V. Chlorodibro- momethane (124-48-1)																

Part C – Continued															
1. POLLUTANT And CAS NO.  (if available)	2. MARK “X”			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)	
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass	
9V. Chloroethane (74-00-3)															
10V. 2-Chloro- ethylvinyl Ether (110-75-8)															
11V. Chloroform (67-66-3)															
12V. Dichloro- bromomethane (75-71-8)															
14V. 1,1- Dichloroethane (75-34-3)															
15V. 1,2- Dichloroethane (107-06-2)															
16V. 1,1- Dichlorethylene (75-35-4)															
17V. 1,2-Di- chloropropane (78-87-5)															
18V. 1,3- Dichloropro- pylene (452-75-6)															
19V. Ethyl- benzene (100-41-4)															
20V. Methyl Bromide (74-83-9)															



Part C – Continued

1. POLLUTANT And CAS NO.  (if available)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analyses
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)	
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass	
21V. Methyl Chloride (74-87-3)															
22V. Methylene Chloride (75-00-2)															
23V. 1,1,2,2- Tetrachloro- ethane (79-34-5)															
24V. Tetrachloro- ethylene (127-18-4)															
25V. Toluene (108-88-3)															
26V. 1,2-Trans- Dichloro- ethylene (156-60-5)															
27V. 1,1,1-Tri- chloroethane (71-55-6)															
28V. 1,1,2-Tri- chloroethane (79-00-5)															
29V. Trichloro- ethylene (79-01-6)															
30V. Vinyl Chloride (75-01-4)															

Part C – Continued

1. POLLUTANT And CAS NO.  (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)			
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses		
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)			
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass			
GC/MS FRACTION – ACID COMPOUNDS																	
1A. 2-Chloro-phenol (95-57-8)																	
2A. 2,4-Dichlor-Orophenol (120-83-2)																	
3A. 2,4-Dimeth-ylphenol (105-67-9)																	
4A. 4,6-Dinitro-o-cresol (534-52-1)																	
5A. 2,4-Dinitro-phenol (51-28-5)																	
6A. 2-Nitro-phenol (88-75-5)																	
7A. 4-Nitro-phenol (100-02-7)																	
8A. P-chloro-m-cresol (59-50-7)																	
9A. Pentachloro-phenol (87-88-5)																	
10A. Phenol (108-05-2)																	
11A. 2,4,6-Tri-chlorophenol (88-06-2)																	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS																	
1B. Acena-phthene (83-32-9)																	

Part C – Continued

1. POLLUTANT And CAS NO.  (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)		
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses	
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)		
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass		
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (Continued)																
2B. Acena- phtylene (208-96-8)																
3B. Anthra- cene (120-12-7)																
4B. Benzidine (92-87-5)																
5B. Benzo(a)- anthracene (56-55-3)																
6B. Benzo(a)- pyrene (50-32-8)																
7B. 3,4-Benzo- fluoranthene (205-99-2)																
8B. Benzo(ghi) perylene (191-24-2)																
9B. Benzo(k)- fluoranthene (207-08-9)																
10B. Bis(2- chlor- oethoxy)- methane (111-91-1)																
11B. Bis (2-chlor- oisopropyl)- Ether																
12B. Bis (2-ethyl- hexyl)- phthalate (117-81-7)																

Part C – Continued

1. POLLUTANT And CAS NO.  (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)			
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses		
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)			
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass			
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (Continued)																	
13B. 4-Bromo-phenyl Phenyl ether (101-55-3)																	
14B. Butyl- benzyl phthalate (85-68-7)																	
15B. 2-Chloro- naphthalene (7005-72-3)																	
16B. 4-Chloro- phenyl phenyl ether (7005-72-3)																	
17B. Chrysene (218-01-9)																	
18B. Dibenzo- (a,h) Anthracene (53-70-3)																	
19B. 1,2- Dichloro- benzene (95-50-1)																	
20B. 1,3- Dichloro- Benzene (541-73-1)																	
21B. 1,4- Dichloro- benzene (106-46-7)																	
22B. 3,3- Dichloro- benzidene (91-94-1)																	
23B. Diethyl Phthalate (84-66-2)																	

Part C – Continued

1. POLLUTANT And CAS NO.  (if available)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analyses
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)	
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (Continued)															
24B. Dimethyl Phthalate (131-11-3)															
25B. Di-N- butyl Phthalate (84-74-2)															
26B. 2,4-Dinitro- toluene (121-14-2)															
27B. 2,6-Dinitro- toluene (606-20-2)															
28B. Di-n-octyl Phthalate (117-84-0)															
29B. 1,2- diphenyl- hydrazine (as azonbenzene) (122-66-7)															
30B. Fluoranthene (208-44-0)															
31B. Fluorene (86-73-7)															
32B. Hexachloro- benzene (118-71-1)															
33B. Hexachloro- butadiene (87-68-3)															
34B. Hexachloro- cyclopenta- diene (77-47-4)															

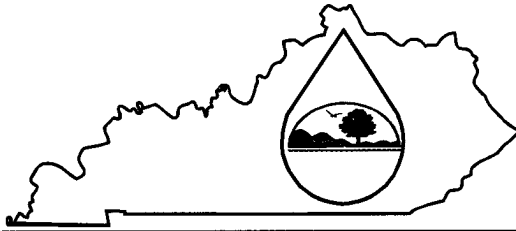
Part C – Continued																
1. POLLUTANT And CAS NO.  (if available)	2. MARK “X”			3. EFFLUENT								4. UNITS		5. INTAKE (optional)		
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses	
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)		
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass		
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (Continued)																
35B. Hexachloroethane (67-72-1)																
36B. Indneo-(1,2,3-oc)-Pyrene (193-39-5)																
37B. Isophorone (78-59-1)																
38B. Napthalene (91-20-3)																
39B. Nitrobenzene (98-95-3)																
40B. N-Nitrosodimethylamine (62-75-9)																
41B. N-nitrosodi-n-propylamine (621-64-7)																
42B. N-nitrosodiphenylamine (86-30-6)																
43B. Phenanthrene (85-01-8)																
44B. Pyrene (129-00-0)																
45B. 1,2,4 Trichlorobenzene (120-82-1)																

Part C – Continued

1. POLLUTANT And CAS NO.  (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)		
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analyses	
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)		
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass		
GC/MS FRACTION – PESTICIDES																
1P. Aldrin (309-00-2)																
2P. α-BHC (319-84-6)																
3P. β-BHC (58-89-9)																
4P. gamma-BHC (58-89-9)																
5P. δ-BHC (319-86-8)																
6P. Chlordane (57-74-9)																
7P. 4,4'-DDT (50-29-3)																
8P. 4,4'-DDE (72-55-9)																
9P. 4,4'-DDD (72-54-8)																
10P. Dieldrin (60-57-1)																
11P. α- Endosulfan (115-29-7)																
12P. β- Endosulfan (115-29-7)																
13P. Endosulfan Sulfate (1031-07-8)																
14P. Endrin (72-20-8)																

Part C -- Continued															
1. POLLUTANT And CAS NO.  (if available)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)	
				Concentration	Mass	Concentration	Mass	Concentration	Mass				Concentration	Mass	
GC/MS FRACTION -- PESTICIDES															
15P. Endrin Aldehyde (7421-93-4)															
16P. Heptachlor (76-44-8)															
17P. Heptachlor Epoxide (1024-57-3)															
18P. PCB-1242 (53469-21-9)															
19P. PCB-1254 (11097-69-1)															
20P. PCB-1221 (11104-28-2)															
21P. PCB-1232 (11141-16-5)															
22P. PCB-1248 (12672-29-6)															
23P. PCB-1260 (11096-82-5)															
24P. PCB-1016 (12674-11-2)															
25P. Toxaphene (8001-35-2)															





# Kentucky Pollutant Discharge Elimination System (KPDES)

## High Quality Water Alternative Analysis

The Antidegradation Implementation Procedures outlined in 401 KAR 5:030, Section 1(3)(b)5 allows an applicant who does not accept the effluent limitations required by subparagraphs 2 and 3 of 5:030, Section 1(2)(b) to demonstrate to the satisfaction of the Environmental and Public Protection Cabinet that no technologically or economically feasible alternatives exist and that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the water is located. The approval of a POTW's regional facility plan pursuant to 401 KAR 5:006 shall demonstrate compliance with the alternatives analysis and socioeconomic demonstration for a regional facility. This demonstration shall also include this completed form and copies of any engineering reports, economic feasibility studies, or other supporting documentation.

### Facility Information

Facility Name:	Lightsource Mining Company	KPDES NO.:	Pending
Address:	P.O. Box 1590	County:	Floyd
City, State, Zip Code:	Martin, KY 41649	Receiving Water Name:	Simpson Branch

High Quality Water Alternative Analysis: For each alternative below, discuss what options were considered and state why other options were not considered feasible.

- 1. Discharge to other treatment facilities.** Indicate which treatment works have been considered and provide the reasons why discharge to these works is not feasible.

Reference Attached II, Alternatives Analysis, Item 1.

- 2. Use of other discharge locations.** Indicate what other discharge locations have been evaluated and the reasons why these locations are not feasible.

Reference Attached II, Alternatives Analysis, Item 2.

**II. Alternatives Analysis - continued**

**Water reuse or recycle.** Provide information about opportunities for water reuse or recycle at this facility. If water reuse or recycle is not a feasible alternative at this facility, please indicate the reasons why.

**Reference Attached II, Alternatives Analysis, Item 3.**

**4. Alternative process or treatment options.** Indicate what process or treatment options have been evaluated and provide the reasons they were not considered feasible.

**Reference Attached II, Alternatives Analysis, Item 4.**

**II. Alternatives Analysis - continued**

- C 5. On-site or subsurface disposal options.** Discuss the potential for on-site or subsurface disposal. If these options are not feasible, then please indicate the reasons why.

**Reference Attached II, Alternatives Analysis, Item 5.**

- C 6. Evaluation of any other alternatives to lowering water quality.** Describe any other alternatives that were evaluated and provide the reasons why these alternatives were not feasible.

**Reference Attached II, Alternatives Analysis, Item 6.**

### III. Socioeconomic Demonstration

1. State the positive and beneficial effects of this facility on the existing environment or a public health problem.

**Reference Attached III, Socioeconomic Demonstration, Item 1.**

2. Describe this facility's effect on the employment of the area

**Reference Attached III, Socioeconomic Demonstration, Item 2.**

3. Describe how this facility will increase or avoid the decrease of area employment.

**Reference Attached III, Socioeconomic Demonstration, Item 3.**

4. Describe the industrial or commercial benefits to the community, including the creation of jobs, the raising of additional revenues, the creation of new or additional tax bases.

**Reference Attached III, Socioeconomic Demonstration, Item 4.**

5. Describe any other economic or social benefits to the community.

**Reference Attached III, Socioeconomic Demonstration, Item 5.**

**III. Socioeconomic Demonstration - continued**

- |  | <u>Yes</u>                          | <u>No</u>                           |
|--|-------------------------------------|-------------------------------------|
| 6. Will this project be likely to change median household income in the county?        | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 7. Will this project likely change the market value of taxable property in the county? | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 8. Will this project increase or decrease revenues in the county?                      | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 9. Will any public buildings be affected by this system?                               | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

10. How many households will be *economically* or *socially* impacted by this project? **15**

**Reference Attached III, Socioeconomic Demonstration, Item 10.**

11. How will those households be *economically* or *socially* impacted? (For example, through creation of jobs, educational opportunities, or other social or economic benefits.)

**Reference Attached III, Socioeconomic Demonstration, Item 11.**

- |   | <u>Yes</u>               | <u>No</u>                           |
|---|--------------------------|-------------------------------------|
| 12. Does this project replace any other methods of sewage treatment to existing facilities?<br>(If so describe how) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**Reference Attached III, Socioeconomic Demonstration, Item 12.**

- |  | <u>Yes</u>                          | <u>No</u>                |
|--|-------------------------------------|--------------------------|
| 13. Does this project treat any existing sources of pollution more effectively?<br>(If so describe how.) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

**Reference Attached III, Socioeconomic Demonstration, Item 12.**

**Yes** **No**  
☐ ☒

14. Does this project eliminate any other sources of discharge or pollutants?  
 (If so describe how.)

**Reference Attached III, Socioeconomic Demonstration, Item 14.**

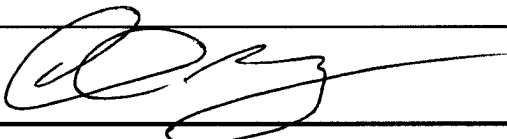
15. How will the increase in production levels positively affect the socioeconomic condition of the area?

**Reference Attached III, Socioeconomic Demonstration, Item 15.**

16. How will the increase in operational efficiency positively affect the socioeconomic condition of the area?

**Reference Attached III, Socioeconomic Demonstration, Item 16.**

**IV Certification:** I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

<b>Name and Title:</b>	G. Dale Murray, President	<b>Telephone No.:</b>	606-285-9472
<b>Signature:</b>		<b>Date:</b>	September 15, 2008

## **II. Alternative Analysis**

- Item 1      Alternative treatment works have been investigated. The nearest water treatment system according to the Southern Water and Sewer District is at Wayland, which is approximately 8.0 miles away. It would cost approximately \$48,400 at \$40/foot to contract the installation of 1,210 feet of collection lines and another \$1,689,600 to send the discharge to the nearest treatment facility at Wayland. This would be a total cost of \$1,738,200 to collect and transport the discharge to the Wayland facility. A sedimentation pond would also need to be installed at the Wayland facility to remove the silt from the discharges. Construction and maintenance of this sedimentation would cost approximately \$40,000. Total costs to collect, transport and treat the discharges in this manner would exceed \$1,778,200.

Another alternative would consist of transporting the discharge by trucks. It would cost approximately \$48,400 at \$40/foot to contract the installation of 1,210 feet of collection lines to the storage tanks. For a 25 year, 6 hour storm event the runoff from the permit area is approximately 2,276,010 gallons per hour. The operator would have to purchase 702 storage tanks for the 6 hour storm event which would cost approximately \$90,527,112 at \$128,956 pre 150,000 gallon storage tank. To transport the discharge to the Wayland facility the operator would have to purchase an 8,000 gallon tank truck. The tank truck would cost approximately \$130,000 and would take 1 hour to fill. The tank truck would have to make 13,163 trips to drain the discharge from the 25 year, 6 hour storm event. Total costs to collect and transport the discharges in this manner would exceed \$90,878,712.

- Item 2      Simpson Branch is the only creek which can directly receive the discharge from this operation along Simpson Branch (CR). As stated previously, to collect and gather the discharge from this area would cost \$48,400 at \$40.00 a foot for piping. This cost is exclusive of the storage and transport of \$13,656,060 to Wayland.

Another alternative would be to pipe the water to a non-supporting watershed. According to the summary of 2006 305(b) List of Impaired Waters the nearest non-supporting watershed is Beaver Creek. It would cost approximately \$48,400 at \$40/foot to contract the installation of 1,210 feet of collection lines and another \$2,323,200 to send the discharge to Beaver Creek. This would be a total cost of \$2,371,600 to collect and transport the discharge to Beaver Creek

The transporting of water to Beaver Creek would have a negative impact on the watershed. Causing more detrimental environmental impact that is not needed. Flooding will occur within the watershed destroying homes, property, roads and natural resources. The streams within a reasonable distance empty into the Levisa Fork. This added expense as an alternative is not viable since Levisa will eventually receive the discharges anyway.

Item 3 Water could and will be reused for dust suppression and hydro seeding at the project site; however, the amount used is minimal when compared to the total discharge. The total drainage is for a 25 year, 6 hour storm event the runoff from the permit area is approximately 2,276,010. While a portion of the water could be used for dust suppression, it is generally required only during dry times when discharges are low or non-existent. Again, the amount of water used would be minimal. A water truck can carry approximately 5,000 gallons of water. Roads, ect. are generally watered twice a day during dry times. The operation will water 6.00 acres of roads which will take 60,000 gallons of water.

Water will also be reused for hydro seeding during reclamation. A 3,500 gallon tank truck will seed 1 acre and the operation will reclaim 50.51 acres. This would reuse approximately 176,785 gallons of water for hydro seeding. This equates to no other water is needed for recycling or reuse with the operation. You would have approximately 2,039,225 gallons of excess water that can't be reused.

Item 4 The cost of purchasing and installing a small package plant at the site would be approximately \$50,000 and the collection system of \$48,400. The cost to operate and maintain this facility 24 hours a day, 7 days a week would be approximately \$11,500/ month. The plant site could be limited to an acre, but the holding facility could be as large as 10% of the drainage area or larger, since the runoff has to be treated in its entirety. The cost of constructing such a facility would run in the hundreds of thousands of dollars, since it would be required to meet all MSHA standards. The removal cost of the plant might well be at its salvage price, however the cost of eliminating the embankment and void of the holding facility would again run in the hundred thousand dollar range.

Item 5 The only way to store the discharge on site is with a pond. To maintain the water on site without a discharge would require a very large ponds. This pond would have to be built in the stream thus impacting a vast portion of the stream and causing a more detrimental environmental impact that is not needed.

It is nearly impossible to construct a facility that would never discharge. The cost of this structure and properties would cost \$4,000,000 for construction and stream mitigation.



- Item 6      Other alternatives reviewed include reducing the standards for discharge or avoiding the project altogether.

By reducing the water quality limits, the project would experience increases in costs and additional time spent. Larger in-stream ponds would have to be constructed or in the case of sediment structure reconstructed which would have a substantial negative impact on the stream and could cost as much as \$3,000,000 for construction and stream mitigation. Large volumes of water would need to be stored within the structure producing more danger if a structural failure were to occur. The costs of removing the pond would also be much greater (approximately \$300,000 per pond).

Another option to consider is to avoid the project altogether. This would have many negative affects on the area including reduction of employment and the loss of valuable coal that currently keeps Kentucky's electric costs the lowest in the nation. Avoiding this operation would not only affect coal miners but also the many businesses that provide support to the mining industry. This would eliminate the 25 new jobs. It would cancel indirect affects on approximately 50 local suppliers and their families. It would do away with the 0.2 million tons of coal severance taxes and the income taxes which come directly into both the state and local economy.

### **III. Socioeconomic Demonstration**

- Item 1      This operation will provide sediment control facilities in areas where there have been previous mining. Approximately 30 acres of the proposed permit area has been previously impacted by pre-law mining and 35 acres of the proposed permit area has been previously impacted by logging. These facilities will control the discharge of an area covering approximately 110 acres.

The movement of sediment is mostly unabated within the area but the proposed mining operation will create and maintain sediment control structures in the form of ponds. These will treat existing problems and reduce or eliminate their effect on the environment.

- Item 2      The proposed mine would be a new mine with all new personnel needed for operation. This mining operation would provide employment for approximately 25 men. These jobs provide higher wages than other industry jobs in Floyd County. The average weekly wage in the mining industry for Floyd County is \$778.76. The average weekly wage for all industries in Floyd County is \$545.49 (U.S. Bureau of Labor Statistics).

- Item 3      The economy of Floyd County is dependent on the mining industry. The mining industry in Floyd County employs nearly 580 employees. The new mine will directly provide employment for approximately 25 men. This would give out-of-work miners and associated personnel an opportunity for employment while also providing possibilities for entry-level personnel to gain experience in the mining industry. This will also affect the industries that supply the material and equipment needed for mining, as well as engineering services and training that are needed for the mining industry for employment of as many as 50 other local businesses. The unemployment rate in Floyd County is approximately 6.5%.

- Item 4      Each new mine proposed will solidify the employment for people who may currently be employed looking for better paying jobs in the mining industry. This would allow experienced personnel to advance from current positions thus opening up new positions for less experienced miners who need employment. The proposed life of this mine is 2 years with additions possible. Approximately 200,000 tons are expected to be recovered from this mine which will generate around \$900,000 in severance taxes. Floyd County will receive approximately \$500,000 (50%) of these taxes to be used for local education, health care, and other city and county projects. The unemployment rate in Floyd County will rise .04 % without this job.

New revenue for Floyd County would also be generated from local income, property and sales taxes. The average person will pay approximately 30% of

there income in federal taxes. The proposed job will employ 25 men that will pay approximately \$280,353 in federal taxes. The facilities will create additional revenue to the local businesses of the area through supplies and services needed for the mining operation and fulfilling the needs of the employees of the operation. The proposed mining will increase economic benefits to the area and will perpetuate those already in existence

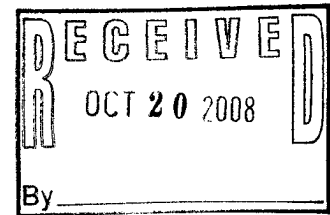
- Item 5     The jobs this proposed mine will create provide some of the highest wages in Floyd County. With an average weekly wage of \$778.76, a Floyd County miner makes approximately \$233.00 dollars more on the week than the average industry worker in Floyd County. The creation of these jobs also allows taxes to be collected spurring community development and the creation of non-coal related jobs. Severance taxes can be used to improve schools, water lines, sewage facilities and other community resources of Floyd County.
- Item 10    The facility is expected to employ approximately 25 men. Thus it will impact the 25 households of those men plus the households of at least another 50 local business owners in Floyd and surrounding counties and their employees that provide goods and services to the facility. The average weekly wage in the mining industry for Floyd County is \$778.76. The average weekly wage for all industries in Floyd County is \$545.49 (U.S. Bureau of Labor Statistics).
- Item 11    The households of the 25 employees will be impacted by the higher than average incomes provided by the jobs. The average weekly wage in the mining industry for Floyd County is \$778.76. The average weekly wage for all industries in Floyd County is \$545.49 (U.S. Bureau of Labor Statistics). Another 50 households of the business owners who provide services for the mine will be impacted by the increased revenue this mine will provide to the existing businesses. The employees will be impacted positively with a more secure employment outlook due to the increased revenue. The unemployment rate in Floyd County will rise approximately 4% without this job.
- Item 12    There are no other existing sewage treatment facilities located within the area to replace. The nearest facility is 8.0 miles away.
- Item 13    Any discharges that exist in the proposed mining area because of 30 acres of pre-law mining and 35 acres of logging activities along with all other discharges in the area will now be treated under this operation.

- Item 14 This area has been logged and a portion of the Elkhorn seams have been previously contour mined by pre-law operations. Approximately 30 acres have been pre-law mined and 35.00 acres have been logged. Drainage that flows through previously mined areas and areas that have been logged will flow through proposed sediment ponds. Thus these current and anticipated discharges will be treated in the proposed structures.
- Item 15 The increase in productivity levels not only provides jobs in Floyd County at a higher than average wage (\$778.76 for mining jobs vs. \$545.49 for other industries) but will create additional revenue for the businesses of the area. The additional revenue of the local businesses and the severance tax dollars (approximately \$900,000) generated by the project will provide the local government with additional tax revenues. These can be utilized for public safety including law enforcement, fire control, and ambulance services while also aiding in the industrial and economic development of the area.
- Item 16 By conducting the preponderance of this operation through contour mining we are disturbing much less surface area and accessing the coal in a more environmentally friendly way. Discharges will be reduced drastically as the surface area involved is only a fraction of what would be involved in a surface area mining operation. Efficiency is increased as much less overburden needs to be removed and costs can be kept down thus providing more money to be available for the workers and in turn the economy of the area when the workers purchase goods such as homes, automobiles and food.

The contour mining portion of this permit will return mine areas to A.O.C. while reestablishing approximate original drainage patterns and vegetation.

**JERRY T. BOW**  
**ENGINEERING AND SURVEYING**

167 STONEHENGE DR.  
PIKEVILLE, KY 41501



October 6, 2008

Mr. Larry Sowder  
Environmental and Public Protection Cabinet  
Division of Water  
Frankfort Office Park  
14 Reilly Road  
Frankfort, KY 40601

Re: Lightsource Mining Company  
DSMRE Permit No. 836-0316

Dear Mr. Sowder:

On behalf of Lightsource Mining Company enclosed is a CD which contains KPDES Form NOI-CM, Form HQAA, Form C, Form 1, and pertinent maps and narratives. Also included is a paper copy of the application including the signature page.

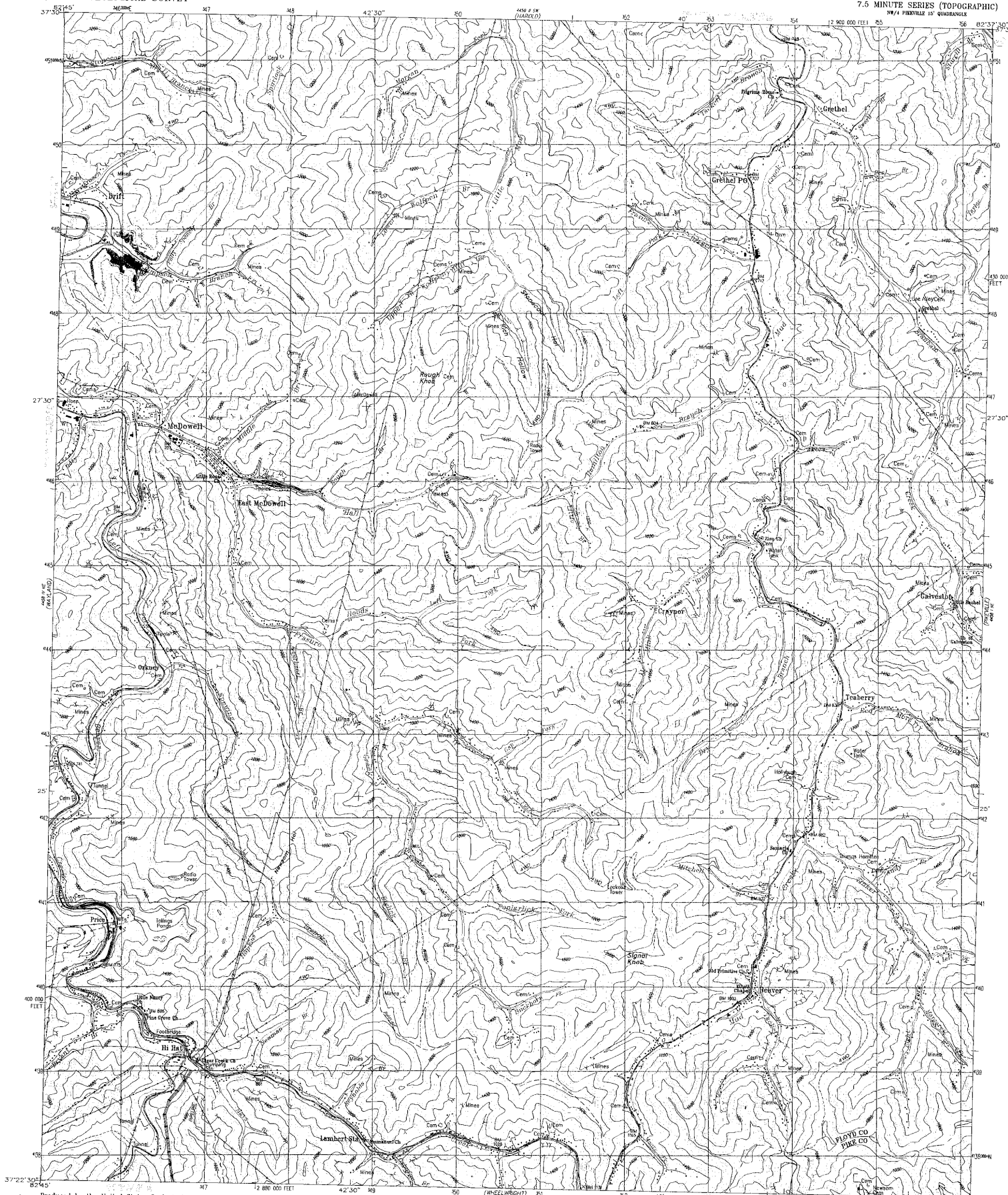
Please feel free to contact me if you have any questions or need additional information.

Sincerely,

A handwritten signature in black ink, appearing to be "Tom Bow", written over a horizontal line.

Tom Bow, PE, PLS  
Project Manager

c: file



Produced by the United States Geological Survey  
in cooperation with Kentucky Geological Survey  
Control by USGS and NOS/NOAA  
Topography by photogrammetric methods from aerial photographs  
taken 1962. Field checked 1984. Revised from aerial photographs  
taken 1968. Field checked 1990. Map edited 1990.  
Projection and 10,000-foot grid ticks: Kentucky coordinate  
system, south zone Lambert conformal conic  
1000-meter Universal Transverse Mercator grid, zone 17  
1983 North American Datum  
The difference between 1983 North American Datum and North  
American Datum of 1983 (NAD 83) for 7.5-minute intersections  
is given in USGS Bulletin 1870. The NAD 83 is shown by  
dashed corner ticks  
All wells shown are gas wells

177M GRID AND 1983 MAGNETIC NORTH  
INDICATED AT CENTER OF SHEET

SCALE 1:24 000  
1 2 3 4 5 6 7 8 9 10  
KILOMETERS  
1 2 3 4 5 6 7 8 9 10  
MILES  
100 200 300 400 500 600 700 800 900 1000  
FEET  
CONTOUR INTERVAL 40 FEET  
NATIONAL GEODETIC VERTICAL DATUM OF 1929

COMPLIES WITH U.S. GEOLOGICAL SURVEY STANDARDS FOR SPATIAL ACCURACY—CLASS 2  
FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER, COLORADO 80262, OR RESTON, VIRGINIA 22092  
AND KENTUCKY GEOLOGICAL SURVEY, LEXINGTON, KENTUCKY 40506  
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

KENTUCKY  
QUADRANGLE LOCATION  
KENTUCKY INFORMATION MAP  
LIGHTHOUSE MARINE COMPANY APPLICATION NO. 406-1316

ROAD CLASSIFICATION  
Primary highway, light-duty road, hard or  
hard surface improved surface  
Secondary highway, Unimproved road,  
hard surface  
Interstate Route U. S. Route State Route

MC DOWELL, KY.  
1947/4 PREVIOUS 15' QUADRANGLE  
37082-05-II-024  
1992  
DMA 4456 I NW-SERIES V853

KPDES MAP

INCREMENTAL BOND BREAK LINE

ITEM NOTES:  
(1)

